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- (71) Applicant (*for all designated States except US*): **EATON CORPORATION** [US/US]; Eaton Center, 1111 Superior Avenue, Cleveland, OH 44114 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (*for US only*): **WHEELER, Robert, Stanley** [GB/GB]; 15 The Ferns, Lostock Hall, Preston, Lancashire PR5 5QT (GB). **STASIK, Anthony** [GB/GB]; 28 Natherlay Road, Coppull, Lancashire PR7 5EH (GB). **HAWARDEN, Jeffrey** [GB/GB]; 9 Laburnum Rd., Helmshore, Rossendale, Lancashire BB4 4LF (GB). **CHAN, Kwok, Wah** [GB/GB]; 4 Kielder Hill, Middleton M24 6TF (GB).

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(54) Title: METHOD OF DETECTING FALSE NEUTRAL IN AN AUTOMATED TRANSMISSION SYSTEM

(57) **Abstract:** A method and system for controlling downshifting in an automated mechanical transmission system (10) utilized on a vehicle. When an automatic power downshift from a currently engaged ratio (GR) is required, the engine acceleration (EA) is monitored and compared with an engine free acceleration (EFA) to detect a false Neutral condition and to take appropriate action accordingly. Alternatively, a false Neutral condition is detected when the Absolute Value of the rotational speed of the output shaft (OS) times the currently engaged gear ratio (GR) minus the rotational speed of the input shaft (IS) is less than a predetermined value (ABS((OS\*GR)-IS)).

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